What is a digital persona?

de Kerckhove, Derrick; Miranda de Almeida, Cristina

Abstract: Digital persona[1] (Clark, R., 1994) is a part of the individual identity that has been extended into the online sphere to which corresponds a digital unconscious (de Kerckhove, D., 2012) structuring a digitally divided self (Quartiroli, I., 2011). It has personal, social, institutional, legal, scientific and technological aspects that have to be reconsidered to allow for new ways of understanding and managing identity.

However, the fragmentation of scientific analysis fails to explain what happens to the digital personae in an interdisciplinary way. This is reflected by the current lack of comprehensive framework, the tendency to develop fragmentary management tools and gaps in legal frameworks. *In* this context society, experts, institutions and groups are still in a fragile unconscious, or pre-conscious phase, regarding the opportunities and problems associated with the management of digital persona.

The objective of this paper is to offer a first set of comprehensive features that shape the personal and social sense of digital selfhood and identity and provoke a reflection regarding the future personal, social and institutional management of our digital personae. This on-going research aims at contributing to define the digital persona and to develop models and typologies of digital personhood that are still being developed.

Keywords: Persona; digital; identity; trans-disciplinarity; digital consciousness

Introduction

In the Internet age, the creation of a digital layer over our personal identity produced a strong impact in the very definition of what is a person and her/his identity, be it personal or collective. As a consequence, identity has been extended as a 'digital persona' (Clark, R., 1994), to which corresponds a 'digital unconscious' (de Kerckhove, D., 2012) structuring a 'digitally divided self' (Quartiroli, I., 2011).

This digital persona is an essential part of the individual identity. It involves personal, social, institutional, legal, scientific and technological aspects. However, the fragmentation of scientific analysis fails to explain what happens to the digital personae in an interdisciplinary way. This is mirrored in the current lack of comprehensive framework, in the tendency to develop fragmentary management tools and in the gaps in legal frameworks. Such aspects should be fully reconsidered to allow for new ways of defining, understanding and managing identity.

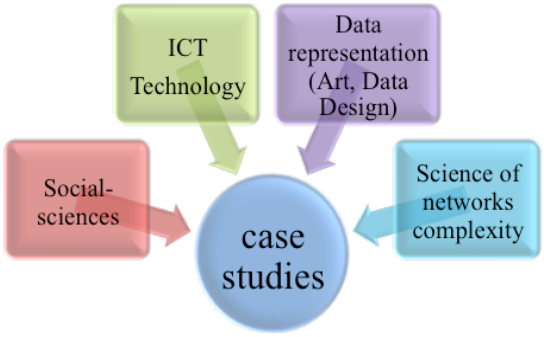
In this context society, experts, institutions and groups are still in a fragile unconscious, or pre-conscious phase, regarding (1) the nature of the digital persona; (2) ethical and mature management of its features (from legal to behaviour features, from political visions to technological ethics); and (3) the need to develop more comprehensive, ethical and friendly self-management tools.

[1] This text is part of a project that has been presented to an ERC Advanced Grant call, by Derrick de Kerckhove. The project Digital Persona is being developed by a team composed by Cristina Miranda de Almeida and Matteo Ciastellardi, both affiliated to the Research Programme Digital Culture, IN3/UOC.

The objective of this paper is to offer a first comprehensive framework of the features that shape the personal and social sense of digital selfhood and identity and to provoke a reflection regarding the future personal, social and institutional management of our 'digital personae'.

This on-going research aims at contributing to define the digital persona and to develop models and typologies of digital personhood. The method combines different approaches such as Action Theory, Digital Constructivism, and Techno-psychology to develop a theoretical model based on a series of case studies selected for different real-life problems around digital identity. In each problem-based case study a cluster of 4 fields converge: social sciences (including Social Psychology, Anthropology, Sociology, Media Studies, Law); Technology (System Engineering); Data Representation (Art, Data Design) and Complexity (Science of Networks, Physics). Each one of these fields represents an area of agency to which the different elements of action upon digital identity are explored. This paper focuses on a smaller part of the research that is already defined: the identification of the 4 areas of agency in Digital Persona that overlap in the form of problem-based clusters to be taken into consideration in each paradigm case study.

The identification of these 4 areas of agency is already a main contribution of this phase of the research process without which the rest of objectives cannot be developed.



Four Areas of Agency that overlap in case studies:

1-Social sciences;

2-ICT

3- Art and Data Design

4-Science of Networks and Complexity

Graph 1: The areas of agency in Case Studies

Background / Conceptual framework

Identity is a loose concept applied to different and occasionally contradictory domains. It bears psychological as well as legal and social definitions. According to *Van der Ploeg* (2010) "identity is considered a key concept in contemporary social theory and in conceptualisations of the relation between technology and society"[2]. The social use of digital communication media is a formatting system that is deeply impacting our inherited Cartesian sense of being separated as individuals and is transforming our identity from a private individuality *into networked* (Castells, 1996) *and connected* (de Kerckhove, 1997) *communities that share collective intelligence* (Levy, 1997) *and connected intelligence (de Kerckhove, 1997), a*

[2] Irma van der Ploeg in DigIDeas "Social and Ethical Aspects of Digital Identities. Towards an Value Sensitive Identity Management" in: http://cordis.europa.eu/search/index.cfm?fuseaction=proj.document&PJ_LANG=EN&PJ_RCN=10232995&pid=119&q=2D2FAA8BD56D7B091CE67BB014675D61&type=adv (Last view February 2013). This project unpacked the central field (digital identity) into the 6 areas (problem areas), from which research questions that correspond to each one of the 6 areas are designed and paired into 3 bundles (made up of 2 areas each) according to 3 polar axis to be developed by 3 Ph.D. candidates. The methodology is based on Case Studies.

digitally-divided self (Quartiroli, 2011) and a liquid self[3] *(Bauman, 2000).* In digital culture identity emerges as an interactive social process of negotiation[4] (Jenkins, 2006) between multiple identities[5] (Turkle, 1995). In order to operate in the digital sphere we develop a digital persona[6] (Clark, 1994), as a necessary digital extension of ourselves that expands our "digital identity[7]" and our digital subject[8] (Cameron, 2005). To this extension of ourselves a digital unconscious can be attributed, in that available data tracked about us are continually increasing. Digital culture has added several new layers to how people define themselves and others. Roger Clarke understands the digital persona as a necessary model to define the individual in the networked society:

> "*The digital persona is a model of the individual established through the collection, storage and analysis of data about that person. It is a very useful and even necessary concept for developing an understanding of the behaviour of the new, networked world*" (Clark, R.[9], 1994).

Greenwood, D. distinguishes between the concepts of person and persona/e. For this author each person has only one 'core identity' but more than one '*persona*'. The latter includes different clusters of roles, relationships, attributes and identifiers for each *persona*:

> *"An analysis of law, practice and logic strongly suggest each person has a "Core Identity" for which there is one-per-person, and each person has more than one "Personae", including clusters of particular roles and relationships and associated attributes and identifiers for each Personae. A "Work" Personae, for example, would include in my case nearly 100 different log-in accounts on a wide variety of systems, applications, services, networks, etc. I have perhaps 10 distinct "Roles", each with several identifiers and attributes, accounts and relationships. Just today I received my new MIT ID Card, complete with a number. I was "provisioned" into my different computer systems, physical access systems and my digital footprint for these Personae is growing by the hour. My Personae as "Architect" of identity trust frameworks includes roles as consultant to the insurance industry, a large city, a large department of defence agency, a large non-profit, a think-tank and so on. My Personae as a yoga practitioner again yields many roles within the related communities (from music, to organizer, to technology provider, to student, teacher and many others) and many, many online accounts, and particular sub-identities. Yet… I have but a single Core Identity. There is, in the end, just one me." (Greenwood, D.)*[10]

[3] Bauman proposes the fluidity of an infinitely negotiable identity.

[4] Richard Jenkins understands identity as an interactive social process of negotiation between the individual and society.

[5] Turkle (1995:178) states that, "the Internet is another element of computer culture that has contributed to thinking about identity as multiplicity. On it, people are able to build a self by cycling through many selves".

[6] Roger Clark sees that a kind of parallel identity takes shape as "digital persona", a model of the individual established through the collection, storage and analysis of data about that person.

[7] Digital identity is a set of claims made by one digital subject about itself or another digital subject. A claim could just convey an identifier—for example, a number is 490-525, or a subject's Windows name; or might assert that a subject knows and should be able to demonstrate a key; or convey personally identifying information—name, address, date of birth and citizenship; or propose that a subject is part of a certain group (age, gender).

[8] A "digital subject" is "a person or thing represented or existing in the digital realm which is being described or dealt with". According to this author the digital sphere includes many "subjects" other than humans, including devices and computers. This author centres digital identity in the process of truthful communication between subjects via digital devices. http://msdn.microsoft.com/en-us/library/ms996456 Last consulted 2013 February 22.

[9] http://www.rogerclarke.com/DV/DigPersona.html

[10] For more information on the work of Dazza Greenwood check http://web.media.mit.edu/~dang/

Revealing the presence of the unconscious has been one of the greatest breakthroughs of psychology in the 20th century. While Freud was focusing on the functions and occasional manifestations of the private unconscious, Jung was exploring what he revealed as the collective unconscious. Taking into account their contributions we wonder what has become of the unconscious now that new forms of "identity" appear with the incorporation of the digital layer that mediates between the social and the personal domains as a part of the constitution of a "digital persona".

The impact of the digital on identity is positive only when it is equilibrated with other fields because any kind of identity management and personal representation is a complex field cluster, a mosaic of fragmented definitions[11], in which the body is an interface but not the limit of private identity. Nevertheless, nowadays, the centrality of technology in the building and rebuilding process of human identity in advanced societies threatens this balance and exposes human identity to new problems. The problematic situation starts with how people's identity is being embedded in devices, as "digital personal identifications" and "digital authentications" and continues with self-tracking systems and biometrics.

The term "digital identity" is also defined as "a digital representation of a set of claims made by one party about itself or another data subject"[12]. This definition opens the door to a series of problems. Some of these problems regarding Digital-Augmented Identity emerge when ICT-based agencies, on their own and not informed by a broader perspective[13], determine who people are. In this context strategies and actions like digital profiling, data visualizations, monitoring, data mining profiling, tracking and geo-localization shrink our identities into reductive categorizations and polar oppositions that hinder the full possibility of identity self-management. On the polar axis between a technocratic attitude (technology is neutral regarding values) and a social-based way of looking at technology (Dupuy, J. M), the dominance of technology is higher. Technology-mediated identities are controlled and constructed according to technological parameters that frequently neglect historical and social claims about fluidity, diversity, multiplicity, pluralism, cultural diversity and multi-culturality. Although a few different initiatives to solve some of these problems have appeared like Digital Mirror, The Digital You and the Real You[14], Google Alerts[15], among others, in this movement between extremes society's behaviour shows these problematic features:

(1) Lack of awareness about digital personae's existence, characteristics, problems and opportunities;
(2) Lack of awareness regarding digital personae's correct ethical management;
(3) Technological illiteracy, which constitutes a kind of pre-consciousness regarding digital personae;
(4) Accessibility discrimination: Part of the information about individuals belongs at an un-accessible part to Internet of which people are unconscious;
(5) Lack of a European policy. Fragmented treatment of the problem;

[11] In Europe HIDE (Homeland Security, biometric identification and personal detection ethics; Steering Committee on Bioethics at the Council of Europe) is currently addressing the dimensions of digital identities and identity management.
[12] Identity Gang's Lexicon at http://identitygang.org/moin.cgi/Digital_Identity
[13] This includes not only social sciences and humanities, but also a bottom-up self-definition approach.
[14] The Digital You often behaves differently from the real you. More often than not, this behaviour is unflattering and potentially harmful, to others or to our own reputation. In one study, subjects had to contact an unknown person to split with them a sum of money. When the contact was by handwritten note, the test subjects lied 69% of the time about the total sum of money to be split. This increased to 92% when the communication was by email. This is a particularly striking example. Often the differences of behaviour when we are online are quite subtle and even subconscious.
[15] Google Alerts are email updates of the latest relevant Google results (web, social platform, news) based on a choice of query or topic that is fed onto such as a brand, product or organization name or industry.

(6) Lack of full legal protection;
(7) Stereotyping profiling and identity definition.

Research question and hypothesis

The research question we are addressing regards what elements constitute the digital personae in order to develop a typology of different kinds of action upon digital identity that reflects its structure in the future. The research question asks which are the key fields that are present in actions upon a digital persona so as to propose a complex framework to understand it and manage it. The hypothesis is that action upon digital personae can be understood as a form of organized collective action according to the following definition:

> *"Organized collective action is "the result of a social action (or collective challenge) carried out by the set of formal and informal interactions established between (1) a plurality of individuals, collectives and organized groups (who share, to a greater or lesser extent, a sense of belonging or collective identity among themselves) and (2) other social and political actors with which they come into conflict. This conflict is triggered by the appropriation (of), participation (in), and transformation of relations of power to achieve social goals, and above all, through the mobilization of certain sectors of society" (Tejerina, 2010).*

Given the different forms in which action upon identity have historically developed it is not possible to present any essential definition. In each age there have been a variety of ways, objectives, motivations and concerns to develop action upon identity. When collective action forms groups it is crucial to understand how these collective entities are shaped by means of discussions, negotiation and re-negotiation processes and not take their existence for granted.

Actions upon digital personae imply intentional decisions and interaction structures inside a system of opportunities and restrictions. This paper focuses on identifying the key fields of agency that are present in the construction of digital persona to propose a framework to understand it and manage it well.

After these fields are identified, in a future phase, we will introduce Theories of Collective Action. These are usually applied to understand different kinds of collective actions (for instance they are used to understand the action of ecologist, feminist or pacifist movements, among others), and will be pertinent to understand, in a very structured way, the interaction between the main dimensions, agents, resources, contexts and strategies of action upon digital persona after a little conceptual translation or adjustment.

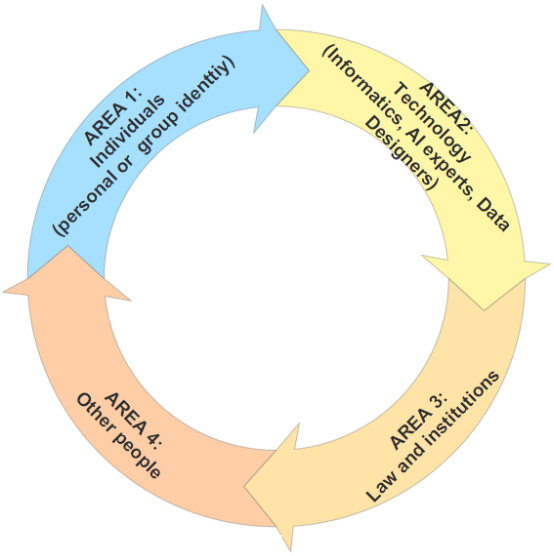
(1) To analyse how these 4 agents act upon the digital personae;
(2) To construct a theoretical, practical, institutional and technological framework to empower people to manage their digital personae in a proper way;
(3) To empower personae in their action practices upon digital personae to avoid identity abuse and lack of skills in identity management;
(4) To enable synchronization of aims, motivations, and interactions around identity problems and opportunities so that they find resonance (or not) in an environment of limited resources and changing opportunities in which there are collaborators and opponents with whom it is necessary to dialog.

The method is a combination of Action Theory with other 2 epistemological qualitative approaches to inquiry such as Digital Constructivism, and Techno-psychology, to develop a theoretical model based on a series of case studies selected for different real-life problems around digital identity. In each problem-based case study a cluster of 4 fields converge: social sciences (including Social Psychology, Anthropology, Sociology, Media Studies, Law); Technology (System Engineering); Data Representation (Art, Data Design) and Complexity

(Science of Networks, Physics). Each one of these fields represents an area of agency to which the different elements of action upon digital identity are explored.

Methodology

The research will discriminate 4 situations, or areas of power, in which opportunities and problems emerge. All the situations are concomitantly active and interconnected in the formation of our digital identities; in each one of these all the agents are active. However, what determines the difference among them is given by the centrality and dominance of one agent over other. A selection of case studies will be analysed. The selection will be based on which agent (who) defines and manages identity. These 4 areas or situations of power constitute 4 problem-areas and will be the conductive thread that structures this research proposal, from research questions to solutions.



Graph 2: Agents in Case Studies

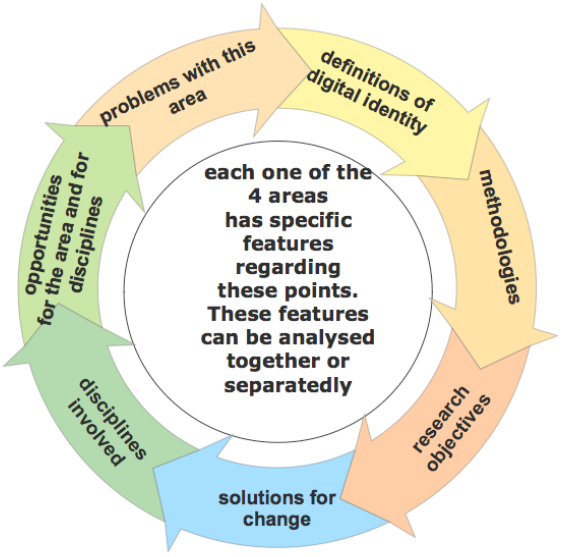
Based on this approach the focus of this research is placed on 4 kinds of agents:

(1) Personal agents: those individuals, groups, companies and institutions that define themselves and self-manage their own identity, express or construct their online persona (eg. Identity sharing in social networks in a conscious or unconscious way);

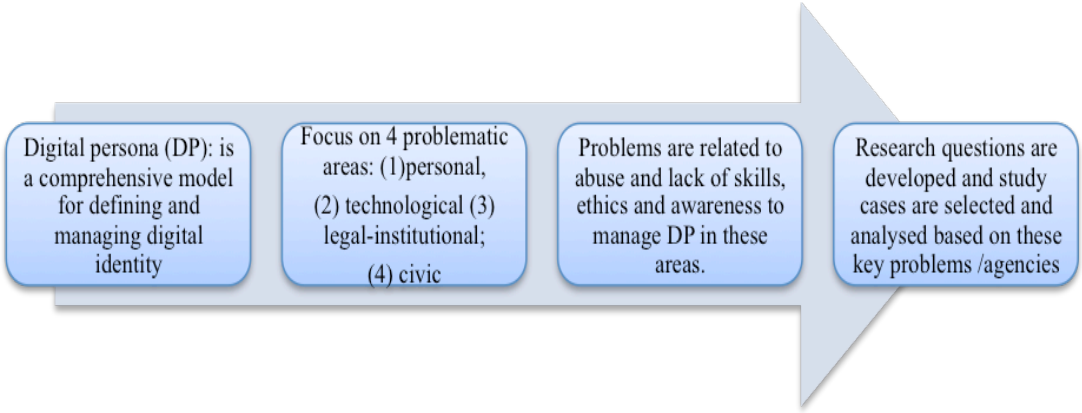
(2) Technological agents: at the sphere of software design, the agents that define and manage other individuals', groups', institutions' identities, in a conscious or unconscious way; Technological agents that define and manage other individuals', groups', institutions' identities, in a conscious or unconscious way (eg. Stereotyped profiling);

(3) Institutional and Legal agents: those who make the rules that limit action and power on digital personae; prepare key policies, profit of digital identity and raw political elements of the definition, construction, re-definition, use, sharing, abusing and empowerment process regarding digital persona. Institutions that define and manage other individuals', groups', institutions' identities, in a conscious or unconscious way (eg. Unethical institutional data-mining);

(4) Civic agents: individuals, informal social groups, interest groups and business stakeholders that interact with, define, manage, re-distribute, profit from or abuse of others' digital persona in a conscious or unconscious way (eg. Crowdsourcing; Re-distributing and sharing identity in social networks; use of profiling to sell goods; spy-waring, fishing, unethical data-mining).



Graph 3: Interconnected research dimensions



Findings and Discussion

In each one of these 4 areas of agency there are particular characteristics regarding identity building, problems and opportunities for change. In order to change the situation, specific analysis and different solutions must be developed and a trans-disciplinary approach is required. These 4 areas of power and agency are the core that operates in all case studies of digital identity. So, each one of the parts of this on-going project will always make reference to these 4 areas and, in so doing, to the dominant agent that corresponds to each area.

Each are can be analysed in a separate way and the same aspects compared, as for each one of the areas the problems are different. In each problem-area of agency some disciplines and fields have more centrality than others. In this sense this proposal parts from each one of the problem-areas to develop research objectives, opportunities of change and impact, as the impact will be discriminated also in relation to fields.

Problem areas are characterized (among others) by:

Area 1 (Personal)- Lack of personal awareness about risks and opportunities regarding individual and collective projection, sharing and management of DP; Lack of technological skill to manage DP;
Area 2 (Technological) - Stereotyped profiling, centrality of technology in defining identity parameters, absence of bottom-up control in technological developments;
Area 3 (Legal-Institutional)- The lack of social-control regarding DP abuse from institutional agencies; lack of a comprehensive legal framework; lack of institutional control on DP;
Area 4 (Civic): Abuse and unethical behaviour in practices of social construction of DP, on the part of peers, informal groups, business and interest groups; privacy abuse.

The principles that used to guide societies' actions in relation to identity are changing. The proposal that 4 areas of agency should be taken into consideration in relation to digital identity constitutes a different perspective. On the one hand, the integration of these 4 areas of agency dialogues with the previous state-of-art developments but, on the other hand, it jumps towards an integrative inclusive perspective that is not present to such an extent in previous achievements.

The integration of these 4 areas of agency is a contribution that is treated in a different way in researches mentioned previously. One of the best references for Digital Persona is Irma von Ploeg's project "*DigIDeas Social and Ethical Aspects of Digital Identities. Towards a Value Sensitive Identity Management*". The project Digital Persona is parallel to the later in relation to methodology and aims: both are trans-disciplinary and centred on problems that converge

in paradigmatic case studies. The "problem" point-of-view, seems to be one of the best ways to deal with complex issues, particularly as it enables discrimination of the particular problems related to each area of agency and opens more possibilities to recommendations to spot opportunities and to find solutions to the problems and obstacles to concrete agents.

Although multiple tools and projects to manage digital personae are being developed, mostly from the private sector, they are still partial solutions, coming mostly from the point of view of ICT (platforms for data representation without inputs from other disciplines) and fail to address and integrate all the layers of the problem. How all the layers of digital personae are simultaneously woven in a complex situation remains obscure. As a result, the fragmented parts of identity are left in a no man´s land, exposed to different kinds of abuse or appropriation. Left as it is, this no man's land is even more potentially problematic and relevant given the fact that digital identity management promises to be an all-pervading "unifying component" in the emerging ICT panorama, alongside the concomitant increase in the centrality of technology on identity and the emergence of other forms of bias (Rundle, 2007).

The broad perspective proposed by the comprehensive treatment of digital personae project, that takes into consideration personal, technological, civic, legal and institutional aspects, is not included in projects like Digital Mirror, The Digital You, the Real You and Google Alerts from the point of view of the individual.

Beyond personal aspects and covering all the problems that were highlighted, what is missing is a European framework –a point of reference at the EU level with regards digital personae that includes identification, authentication, legal and ethics subjective identity management - that (a) allows for dealing with all digital personae layers; (b) integrates disciplines beyond ICT; (c) enjoys the necessary tools to manage identity issues; and, d) is sensitive to possible biases.

This framework should be based on an ethical and respectful understanding of data democracy, where channels and control mechanisms exist for restricting the abusive behaviours. On the one hand, these channels and mechanisms should involve all the sectors implied in identity management for the development of different solutions to problems affecting each sector. On the other hand, members of society should be empowered to manage their digital personae and protect their privacy and reputation.

References

Bauman, Z. (2004). *Identity*, Cambridge. UK: Polity Press.

Cameron, K. (2008). *The Laws of Identity.* Microsoft Software Development Network. Retrieved, November 20, 2012, from http://msdn.microsoft.com/en-us/library/ms996456

Castells, M. (1996). *The Rise of the Network Society*. Oxford: Blackwell Publishers.

Clark, R. (1994). "The Digital Persona and its Application to Data Surveillance", in *The Information Society. Retrieved in* February 26, 2013 from http://www.rogerclarke.com/DV/DigPersona.html#DP

de Kerckhove, D. (1997) *Connected Intelligence*. Toronto: Somerville House Books.

——— (1998) *Connected intelligence: the arrival of the Web society*. London: Kogan Page.

——— (ed.) (1988) *The Alphabet and the brain: the lateralization of writing*. Berlin; New York: Springer-Verlag.

——— (2001) *The Architecture of Intelligence*. The IT Revolution in Architecture. Basel; Boston: Birkhäuser.

Dupuy, J. M. Do We Shape Technologies, or do They Shape us? Retrieved in November 20, 2012, from ec.europa.eu/research/.../ntw-jean-pierre-dupuy-text_en.pdf

Jenkins, H. (2006). *Convergence Culture*. New York: New York University Press.
——— (2003) *Social Identity*. London: Routledge.
Levy, P. (1997). *Collective Intelligence*. New York and London: Plenium Trade.
Quartiroli, I. (2011). *The Digitally Divided Self: relinquishing our awareness to the Internet.*
Rundle, M. et all. (2007). *At a Crossroads: "Personhood" and Digital Identity in the Information Society*. Retrieved in December 20, 2012, from http://www.egov.vic.gov.au/trends-and-issues/identity-management/at-a-crossroads-personhood-and-digital-identity-in-the-information-society-in-word-format-532kb-.html
Tejerina, B. (2010). *La sociedad Imaginada.* Madrid: Trotta.
Van der Ploeg, I. (2010). *The Biometric Body: On Bodily Differences, Built-in Norms, and Automated Classifications, in* A. Ceyhan, P. Piazza (eds.) *Biometric Identification: Issues and Controversies.* Paris: Royal Statistical Society A, Volume 175, Part 2.
Van der Ploeg, I. (2012). "The Body as Data in the Age of Information." In Ball, K.; Haggerty, K. D. and D. Lyon (ed.). The *Routledge Handbook of Surveillance Studies*, London: Routledge.
Zureik, E. (ed.) (2010). *Surveillance, Privacy, and the Globalization of Personal Information: International Comparisons*. Ithaca [N.Y.]: McGill-Queen's University Press.

Authors Notes

Author 1: Derrick de Kerckhove acknowledges support for this article.
Affiliation: University of Toronto (Department of English, Hemeritus Professor), Toronto, Canada; University of Naples (Professor), Italy, and Digital Culture IN3/UOC (Director), Barcelona, Spain

Author 2: Cristina Miranda de Almeida acknowledges support for this article.
Affiliation: University of the Basque Country (Department of Art and Technology), Basque Country, Spain, and Digital Culture IN3/UOC (Visiting Scholar and External Researcher), Barcelona, Spain

Email: <cristinamiranda.de@gmail.com>